

2/6/2012

Growing Tomatoes

In 2009, the U.S. Dept. of Agriculture, National Agricultural Statistics Service states that Florida produced tomatoes on 33,600 acres. Tomato production in Florida is significant in supplying the state and national needs. As a commercial tomato farmer, there are many subjects to consider in getting started in a commercial farming industry.

1. **Choose the right type of tomato** - One of the first factors in growing tomatoes, a producer must consider what type of tomato the farmer wants to grow. In terms of vegetative growth characteristic, there are two basic types: indeterminate and determinate.

The **Indeterminate type** is considered a “Vine” type that continues to grow taller as the season extends. In the long-run, this type produces over a longer period of time.

The **Determinate type** is considered a “Bush” type that sets a final fruit cluster and then stops growing. This type is easier to manage on the farm and in the garden.

Example: **Bella Rosa** – Early-main and fall season. R to ASC, F –R (1, 2) and Vd1. IR to Stemph and TSW. Determinate medium plant with good cover, and with concentrated sets. Large fruits are smooth, deep oblate, and firm with good color and flavor. Mid-early maturity and good heat tolerance. Adapted for mature green and vine-ripe markets.

Heirloom Types - Another type of tomato, with the fruit quality as its basis is the heirloom type. These types are considered old cultivars that have outstanding fruit characteristics and superior taste compared to more conventional types. Although these heirloom tomatoes have superior taste quality, they are somewhat inferior in terms of their vegetative and fruit growth. The heirlooms lack the disease resistance and vigor of modern hybrids where most are prone to soil-borne pathogens. Although heirloom tomatoes are difficult to grow, there is a niche market for them, especially for home gardeners; but, don't rely on these types for the main crop in commercial production.

2. **Choose the type of fruit** - Next, there are numerous shapes of fruit to consider. Choose the type of fruit that best fits your needs (e.g. processing, fresh market). Additional information can be obtained from EDIS: "Tomato Varieties for Florida - Florida "Red Rounds," Plum, Cherries, and Grapes" <http://edis.ifas.ufl.edu/hs1189>
Some of the selections of tomatoes based on fruit shapes are: Large "beefsteak" which are excellent as a slicing tomato; medium size tomato; cherry tomato; plum tomato; paste tomato; and grape tomato.

3. **Season** - The tomato you choose also depends on the season. Not all tomatoes require the same temperature and amount of daylight hours to be productive. The tomato you choose also depends on the season. Examples of these seasonal tomatoes are:

- Early tomatoes
 - First Lady, Ultrasweet, Husky Gold, any Cherry
- Main season tomatoes
 - Sebring, Tygress, Sunoma
- Summer tomatoes
 - Heatwave, Sunmaster, Solar Set, Sun Leaper
- Fall tomatoes
 - Hawaiian Hybrid, Spitfire, Solar Set, Heatwave, Carnival, Sunleaper, Sunmaster

Note: Additional information can be obtained from EDIS: "Tomato Cultivars for Production in Florida" <http://edis.ifas.ufl.edu/in756>

4. **Soil and Planting** - Now that the types of tomatoes are mentioned, the next item to consider is the planting requirements. Tomatoes are sun-lovers; they prefer sun all day where at least six hours of direct sun is needed. The next item is suitable soil and soil prep. Well prepared beds with high organic matter and a light application of a general purpose fertilizer will increase your productivity. Tomatoes can be planted in traditional beds, raised beds, and containers. Traditional bed planting is when tomatoes are planted in rows, where raised beds use lumber or other materials to contain the elevated soil or soil mix. Container plantings are in pots or other materials where the plant roots never come in contact with the ground.

5. **Cultural Practices** - Once again, choose the suitable or desired type and cultivar you want, then purchase stocky and strong transplants with good color and a healthy root development, and no existing flowers. In planting, plant a little deeper than the container in which it is grown and water with a fertilizer solution. Transplants, with especially long stems, can be planted with the stem buried horizontally an inch or two deep. Tomatoes tend to produce suckers that have to be removed occasionally. A tomato sucker is a small shoot that grows out of the joint where a branch on the tomato plant meets a stem. Remove suckers, side shoots that arise where a leaf joins the main stem.

Determinate tomatoes and caged indeterminate tomatoes do not need to be de-suckered.

6. **Staking** – Supporting the tomato plant by staking is especially important with indeterminate type tomatoes. Indeterminate tomatoes need to be trained on stakes or grown in a cage – much larger than what is needed for determinate types. By using a soft cloth or a soft cloth or other soft material as a tie, secure the plant stem to the stake every 8 to 12 inches apart. Since determinate tomatoes are a bush type, smaller cages can be used to support them.
7. **Fertilizer (Supplemental)** – Tomatoes need a constant source of nitrogen. Sidedressing is one method that is used to supply the plant with this needed nutrient. The process in this procedure is to make the first application when the first cluster of fruit is set. Four to six weeks after the first application, make a second application. In your applications, you can use nitrogen fertilizer such as ammonium nitrate, or an all purpose fertilizer with nitrogen. If your soil has a low or acidic pH, do not use ammonia sulfate fertilizer. This type will tend to lower your pH even more with time. Additional information can be obtained from EDIS: “Nutrition and Fertilizers for Vegetables” [http://edis.ifas.ufl.edu/topic vegetable nutrition and fertilizers](http://edis.ifas.ufl.edu/topic_vegetable_nutrition_and_fertilizers)
8. **Harvesting** – To achieve the best flavor, harvest ripe fruit. This time is when the fruit is soft (not mushy) and after full color develops. Remember, that although most tomatoes are red, some cultivars vary in color (e.g. Black Cherry – deep burgundy red, Striped German - Bicolor red and yellow fruit, Valencia - Sunny orange). For the red tomatoes, harvest at “breaker” stage when the fruit is pale and developing a pinkish tinge. Ripen indoors at room temperature. Light is not necessary for the ripening process. For storage, although refrigeration is commonly used, you can ideally store ripe tomatoes at room temperature for a limited time.

Pest Problems – There is nothing more discouraging than discovering the crop damaged from pest and diseases. The damage is done and there is no recovery. Prevention is the key! Keep a close watch for problems and act promptly when necessary. Make sure you have the problem properly identified before you treat with a pesticide. You don’t want to treat for a disease when insects are the problem (and vice-versa). Use the least toxic pesticide that will do the job. Additional information can be obtained from EDIS: “Disease Control for Florida Tomatoes” <http://edis.ifas.ufl.edu/vh056>. Another disease resource is “The 2006 Florida Plant Disease Management Guide: Tomato” <http://edis.ifas.ufl.edu/pg059>

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